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### **REMARKS**

Entry of the amendments is respectfully requested. Claims 1-28 and 38-48 are pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the remarks that follow.

1. **Withdrawal of the Holding of Finality**

The Examiner has made the Office Action final and argues that the Lehmann et al. patent shows the reincorporation of fine particles of curd into cheese and the Kosikowski reference shows the use of a colloid mill in a cheese making process. The Examiner further asserts that the only differences between the claimed invention and the teachings of the prior art are "the use of a colloid mill, homogenization, and pasteurization," that "Kosikowski discloses mixing/homogenization, and pasteurization as conventional process steps in cheese production, and "It is art-recognized that the use of a homogenizer and/or colloid mill serves to mix and decrease particle size." The Examiner then concludes that all claims would have been obvious. However, these conclusory statements falls short of what is required during examination.

Examiners are required to consider the limitations in each and every claim. Specially, "On taking up an application for examination . . . the examiner shall make a thorough study thereof." 37 CFR §1.104(1). "In rejecting claims, for want of novelty or for obviousness, the examiner must cite the best references at his or her command. . . . The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified." 37 CFR

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§1.104(c)(2). Although the Examiner has listed each rejected claim, he has failed to consider each and every limitation of the claims. For example, independent claim 39 requires the mixing step to comprise mixing *without demineralization* of the fine particles. The prior art of record fails to teach or suggest this limitation. Furthermore, the Examiner has *never* addressed this limitation. Clearly, the Examiner has *not* considered all of the limitations in each and every claim.

Furthermore, even if the Examiner has shown all claims to be *prima facie* obvious, which the applicant denies, the Examiner has also failed to consider the rebuttal evidence submitted in the Response to the Office Action filed on May 27, 2004. *See In re Piasecki*, 745 F.2d 1468 (Fed. Cir. 1984). As the Federal Circuit said in *Piasecki*, “If rebuttal evidence of adequate weight is produced, the holding of *prima facie* obviousness . . . is dissipated. Regardless of whether the *prima facie* could have been characterized as strong or weak, the examiner must consider all of the evidence anew. *In re Piasecki*, 745 F.2d 1468, 1472 (citing *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976)). The Examiner failed to consider the rebuttal evidence offered in the last response.

For these reasons, the holding of finality should be withdrawn.

2. Rejection of Claims 1-28 and 38-48 Under § 103

Claims 1-28 and 38-48 stand rejected as unpatentable over U.S. Patent No. 4,957,751 to Lehmann et al. in view of Kosikowski (Chapter 8).

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The applicant begins by requesting the Examiner to understand that the invention is more than simply using "the specific processing steps of Kosikowski in that of Lehmann." Nor are the only differences between the claimed invention and the teachings of the prior art "the use of a colloid mill, homogenization, and pasteurization," as the Examiner asserts. Instead, as is explained below, the claims, including the independent claims, require steps that are neither taught nor suggested by the prior art of record.

The applicant reasserts that the Examiner has failed to establish a *prima facie* case of obviousness. First, the combined references fail to provide sufficient motivation to lead one skilled in the art to make the claimed invention. Specifically, in leading one skilled in the art, the prior art must suggest to the ordinary skilled artisan that the combination should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. *In re Dow Chemical Co*, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988) (emphasis added). Indeed, both the suggestion and the expectation of success must be found in the prior art, not in the Applicant's disclosure. *Id.* Moreover, a prior art reference must be considered in its entirety with consideration given to disclosures that diverge or teach away from the invention at issue as well as disclosures which direct the skilled artisan to the invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 300 (Fed. Cir. 1985). The Applicants believe that the Examiner's § 103 rejections fail to meet the above standards.

The Examiner recognizes that the Lehmann et al. reference fails to show use of a colloid mill, homogenization, and pasteurization but looks to the Kosikowski reference for showing

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these. The Applicant traverses on the grounds that there is insufficient motivation to combine the references and, even if properly combinable, the references fail to teach all elements of the claimed invention.

The arguments made in the Response to the January 2, 2004 Office Action are reasserted and incorporated herein by reference. The remaining remarks address the independent claims only.

a. Independent Claims 1 and 42

Independent claims 1 and 42 require mixing the fine particles of cheese curd from the previous lot of milk into the subsequent lot of milk to form the cheese so as to mechanically reduce the particle size of at least a plurality of the fine particles of cheese curd.

Lehmann et al. teaches a method of making *processed* cheese in which many steps are undertaken to liquefy fine particles into a low calcium solution, such as water or whey. The term "process" refers to the use of emulsifying salts, as defined by the U.S. Code of Federal Regulation. See Exhibit 1. Lehmann et al. uses  $\text{Na}_2\text{HPO}_4$ , an emulsifying salt, to make its processed cheese. (col. 2, lines 26-27; Exhibit 2).

Lehmann et al. fails to teach or suggest mixing the fine particles of cheese curd into *milk*, as claims 1 and 42 require. Instead, Lehmann et al. specifically states that adding fine particles to milk causes problems due to milk's calcium content. Therefore, Lehmann et al. mixes fine

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particles with a low-calcium solution such as water or whey instead of milk. (col. 2, lines 34-38).

Lehmann et al. also fails to teach or suggest *mechanically* reducing the particle size of at least a plurality of fine particles of cheese curd, as claims 1 and 42 require.

Kosikowski fails to cure these deficiencies. Kosikowski teaches using a homogenizer to restore the normal smoothness of cream dressing for cottage cheese and to homogenize cream dressing for cottage cheese. Kosikowski does not teach or suggest mixing fine particles of cheese curd into milk and does not teach or suggest *mechanically reducing the particle size of at least a plurality of fine particles of cheese curd*, as claims 1 and 42 require. In fact, Kosikowski's only discussion of fine particles of cheese curd is that "Gentle, uniform cutting keeps the curd from disintegrating into fine particles, and thus avoids heavy yield loss." (Chapter 7, page 93, lines 2-3). Upon reading Kosikowski, the only thing that one skilled in the art would be motivated to do with fine particles of cheese is be careful not to generate them.

The Examiner contends that Kosikowski teaches the use of a homogenizer and "It is art-recognized that the use of a homogenizer and/or colloid mill serves to mix and decrease particle size." However, the fact that the claimed invention is within the capabilities of one skilled in the art is not by itself sufficient to establish *prima facie* obviousness. See MPEP § 2143.01.

Furthermore, the Examiner's proposed combination would change the principle of operation of the homogenizer of Kosikowski, as it uses a homogenizer to restore the normal smoothness of cream dressing for cottage cheese and to homogenize cream dressing for cottage

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cheese. In doing so, Kosikowski breaks up *fat globules* in the dressing, not *proteins* in fine particles of cheese. See Exhibits 3-6, all of which show that homogenization is used in the dairy and milk-based food industries to break up *fat globules*. In contrast, claims 1 and 42 require mechanically reducing the particle size of at least a plurality of the fine particles of cheese curds, which breaks up proteins in the fine particles. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. See MPEP § 2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Therefore, Kosikowski is not properly combinable with Lehmann et al.

Even if Lehmann et al. and Kosikowski were combined, the invention would not result as the combined teachings fail to teach or suggest (1) mixing the fine particles of cheese curd into milk and (2) *mechanically* reducing the particle size of at least a plurality of fine particles of cheese curd.

For at least these reasons, claims 1 and 42 and the claims that depend therefrom are non-obvious in light of the cited references.

b. Independent Claim 28

Independent claim 28 require washing the curds with a wash water, "wherein the wash water contains fine particles of cheese curd; and collecting the fine particles of cheese curd from the wash water." Both Lehmann et al. and Kosikowski fail to teach or suggest this step.

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Therefore, one skilled in the art would not modify the teachings of Lehmann et al. to include this step, and claim 28 and the claims dependent therefrom are allowable over the cited references.

c. Independent Claims 39 and 41

In independent claim 39, the mixing step comprises mixing without demineralization of the fine particles. Independent claim 41 requires "wherein the mixing step comprises mixing without decalcification of fine particles." In contrast, Lehmann et al. specifically requires decalcification of the fine particles and specifically states that the calcium causes a problem in the production of rennet cheeses in that the calcium content makes it impossible to reliquify the fine particles without adding emulsifying salts. Lehmann et al. particularly teaches that the calcium creates bridges between the casein micelles and accordingly impedes reliquification of cheese fines. Lehmann et al. further notes that although the emulsifying salts do bond the calcium components enough to allow reliquification, the salts remain in the product and make it impossible to use the cheese fines even for producing processed cheese. Thus, the Lehmann et al. patent teaches that calcium causes problems in cheese making processes and must be removed. This language strongly teaches away from the claimed invention. A prior art reference teaches away from the proposed combination of references if it leaves the impression that the product would not have the property sought by the applicant. *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963). "It is improper to combine references where the references teach away from their combination." MPEP 2145 (citing *In re Grasselli*, 713 F.2d

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731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). Thus, it is improper to combine the teachings of Lehmann et al. with those of Kosikowski. Further, Kosikowski does not teach or suggest mixing without demineralizing the fine particles or without decalcification of the fine particles. Therefore, even if the references were combined, the invention would not result. Thus, claim 39 and the claims that depend therefrom are allowable over the combination of references.

d. Independent Claim 48

For independent claim 48, Lehmann et al. fails to provide any motivation to lead one skilled in the art to "*increase* the total surface area of the fine particles of cheese curd," as this claim requires. In fact, Lehmann et al. incorporates cheese fines by steps that include a heating step that *decrease* the total surface area of the cheese fine. Therefore, if anything, Lehmann et al. teaches away from the claimed invention. Thus, it is improper to combine the teachings of Lehmann et al. with those of Kosikowski for this additional reason.

It should be noted that when this argument was presented in the last response with respect to dependent claim 2 (Response to Office Action, dated 1-2-04), the Examiner refused to consider the argument and the Rule 132 Declaration from inventor Dr. Robert L. Bradley because "1.) There is no data to support Applicant's conclusions. 2.) Applicant does not compare to the broadest claims. Applicant argues limitations that are not in the independent claims." However, these are *not* appropriate grounds on which to reject Rule 132 evidence. Moreover, for all evidence traversing rejections, *including declarations*, Examiners are

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specifically forbidden to make general statements like the one made by the Examiner in the instant Office Action. MPEP §716.01 ("General statements such as . . . 'the evidence is not commensurate with the scope of the claims' without an explanation supporting such finding are insufficient."). First, there is no requirement for data to be submitted in a Rule 132 declaration. Second, there is no prohibition against arguing limitations in *dependent* claims. Furthermore, Dr. Bradley's statements in paragraphs 8-9 of his declaration support *independent* claim 28 and Dr. Bradley's statements in paragraphs 4-5 support *independent* claim 48.

Dr. Bradley's opinion evidence is "entitled to consideration and some weight so long as the opinion is not on the ultimate legal conclusion at issue," MPEP §716, since it was *not* on the ultimate legal conclusion at issue. Instead, it was on technical information gleaned from a forty-year professorship of Food Science at the University of Wisconsin—Madison. As such, Dr. Bradley's opinion evidence should have been considered.

Although it is not required, Applicant submits herewith, as Exhibit 7, page 56 of a monograph by D.B. Emmons and S.L. Tuckey: *Cottage Cheese and Other Cultured Milk Products*, which states "The chief reason for cooking cottage cheese is to facilitate the removal of whey and the firming of the curd. As the temperature is raised, more whey is expelled and the resulting curd is firmer." As the whey is expelled, the particles shrink in size.

Thus, in Lehmann et al., when cheese fines are heated, this *decreases* the total surface area of the cheese fines, not *increases*, as claim 48 requires. Thus, claim 48 and the claims that depend therefrom, are allowable over the cited references.

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In light of the foregoing arguments, withdrawal of the rejection of claims 1-28 and 38-46 is respectfully requested.

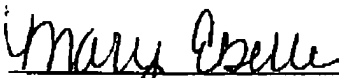
### CONCLUSION

It is submitted that claims 1-28 and 38-46 are in compliance with 35 U.S.C. § 103 and each define patentable subject matter. A Notice of Allowance is therefore respectfully requested.

No fee is believed to be payable with this communication. Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the Director is authorized to direct payment of such fees, or credit any overpayment to Deposit Account No. 23-2053.

The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,



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